BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Providing RO plants in ward No.07 Byatarayanapura

				Estimate cost:		4000000.00			
Sl No	Description of item	No	L	B	D	Qty	Rate	unit	Amount
1	2	3	4	5	6	7	8	9	10
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Geophysical investigation of existing Ground Water in the vicinity, its quality, quantity and acceptability of the users indicating the location of site, recommended depth of casing pipe required an extra depth of 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction **(P.47, I. 9.4) PRED.SR 2012-13**								
						1.00	1938.46	Each BW	**1938.46**
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) **P. 46 / It. 9.1 PRED SR 2012-13**								
	0 to 50 m					**50.00**	315.18	Rmtr	**15759.00**
	50 to 100 m					**50.00**	412.00	Rmtr	**20600.00**
	100 to 150 m					**50.00**	458.35	Rmtr	**22917.50**
	150 to 200 m					**50.00**	484.10	Rmtr	**24205.00**
	200 to 250 m					**50.00**	560.32	Rmtr	**28016.00**
	250 to 300 m					**50.00**	600.49	Rmtr	**30024.50**
3	Supply of ISI mark **175** mm nominal bore, plain end steel casing pipe grade of steel fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 6 to 7 mts. Both ends threaded confirming to IS 4270:2001 and the other end with screwed pipes. All pipes shall be reasonably free from defects. The tubes shall be reasonably straight should be with ISI marking, weighing 25.10 Kg/mtr.(Inclusive of all taxes and duties). Prices include collar-medium duty.**(Piii, It, 84)**								
					Total	**45.00**	1364.75	Rmtr	**61413.75**
4	Providing 200mm dia PVC Pipe(0kg/cm2 **SE PRED PAGE NO 15 IT 3.4.3 G**								
						26.00	1144.00	Rmtr	**29744.00**
5	Providing and making 175mm dia M.S.Cap (as per PREC SR 2012-13) etc., complete as per specifications and direction of the Engineer-in-charge **(Piii, It 85)**								
						1.00	100.00	Nos	**100.00**
6	Supplying and delivery of sub mersible pumpset suitable for borewell of 165mm dia with specified duty conditions as detailed below and satisfied in BIS with ISI mark with a minimum efficiency of 42% pump shall confirm to IS 8034/2002 and motor confirming to IS 9283/1995 with ISI certification with latest amendemnets for the following. Page No. 00000								
	17.5 HP 10kw 40 stage sub mersible pumpset					1	78036.00	Nos	**78036.00**

7	Providing and fixing in galvanised mild steel tubes (Heavy class as per IS 1239 Part-1990) 50mm dia nominal bore with all fittings including cost of all materials labour charges HOM of euipment and testing complete as per specification **(PWD SR 2015-16 P NO.87, It No.13.6)**									
						270.00	457.92	Mtr	**123638**
8	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and sheathed suitable for working voltage upto 1100 Volts. P. No. 49/ I No. 29-c(1) 2.5 Sqm mm of 36 strands 0.3mm dia Group - A **KPWD Electrical SR 2014-15**									
						611.00	188.70	Nos	**115295.70**
9	Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair supporting clamps, one borewell cap. Cable clips with bolts, nuts, valves guages etc., involoved in the job (Necessary GI pipe and specials with be supplied by the board at the site free of cost) (As per rate approved KUWS & DB for year 2008-09									
						1.00	3000.00	Nos	**3000.00**
10	Supply heavy duty galvanized mild steel color suitable for 50mm dia nominal bore galvanized mild steel									
						50.00	130.00	Nos	**6500.00**
11	Supply of non return valve suitable for 50mm dia nominal bore galvanized mild steel tube **(P No 95, It No.13.55)**									
	1330x6%=1409.8					1.00	1409.80	Nos	**1409.80**
12	Supplying of on load charges over switches 4 poles 415V, 5hr ac supply 100-125 amps group A **(BWSSB SR Rate P No 3481, It Group A)**									
						1.00	9845.00	nos	**9845.00**
13	Supply and fully automatic star delta uint push button type with suitable wires, 3 conatactor one adjustable thermal timer mounted on a common base late held in steel enclosure for use on 440/440 volts 3 phase and wired after to the existing wooden board for motor 12.5 HP **(BWSSB SR P No. 335. It No.10(A)**									
						1.00	5665.00	Nos	**5665.00**
14	Erection of single phase preventor ammeters/including fixing selctor switch/current operated earth leakage circuit breakers voltage operated circuit breaker above 100A fuse channel set (3 Nos) HRC fuses above 100A (3 Nos) including transportation charges from stores to spot **(P-28. It No.16)**									
						1.00	1500.00	Nos	**1500.00**
15	Fabricating, supplying and mounting 1200x900x350 mm MS box of 18 SWG suitable for floor /wall mounting, fully weather proof with double stanted top as per drawing with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with approved colour enamelled metal paint etc., complete box of 36200 sqcm @ Rs.0.20 18 SWG **(BWSSB SR P-352, It No 41)**									
						1.00	7866.00	Nos	**7866.00**
16	Supplying and fixing miniature circuit breakers/solaters on existing MCB distribution boards using necessary fixing materials and wiring complete as requireds32 to 63 amps triple pole with all lead and lift, loading, unloading and labour charges etc complete as per specifications **(BWSSB SR P-352, It No 15)**									
						1.00	2090.00	Nos	**2090.00**
17	Supplying and running of GI copper strips or grounding connections using necessary fixing materials required 600x600x3mm GI plate **(P-378, It 9(E)**									
						1.00	1072.00	Nos	**1072.00**

	Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc., complete.... **P No. 32/I No 3d KPWD Electrical SR 2010-11**								
	100 Amps		1*6			**6**	201.40	Nos	**1208.40**
	Basic Rate		190.00						
	Area Weightage @ 6%		11.40						
	Total		**201.40**						
19	Fabrication supplying and mounting MS box of 16 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished 2 coats of red oxide primer paint and finally finished with approved colour enamelled metal paint etc., complete box of 21600 sqcm @ Rs.0.33 **P.No. 49, I. No. 6.40.2 KPWD Electrical SR 2014-15**								
	16SWG	Sq.Cm	2	120.00	60.00	14400.00			
			1	360.00	25.00	9000.00			
						23400.00	0.33	sqm	**7722.00**
20	Supplying and delivery at site brand new star / Essen/ Lotus/Sun-shines/Adarsh/ GK Controls best indigenous make combined energy meter - cum- control panel board unit of size 600x450 x200 mm minimum mechanically strong vermin and water proof. The unit shall have two detachable doors suitable for operation on 3 ph, 50Hz, 380/440 volts, A.C supply with spring loaded latch, locking device with a key ribs should be provided inside the door, canopy apron and louvers ventilators shall be provided. the combined energy meter cum- control panel board unit suitable for operation. The panel board shall be fabricated on single unit in the above components for suitable pumpset. PRED Bangalore Circle SE Approved Date 30.07.2010 **15HP to 30 HP Star Delta Starter**								
		No.	1			**1**	10000.00	Nos	**10000.00**
21	KSRB 1.06.04 Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) **50mm** nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KSRB 1.06.04 (P.No.1.03.37 PWD SR - 2015-16)								
		Each	1			**1**	1843.34	Nos	**1843.34**
	Basic Rate		1739.00						
	Area Weightage @ 6%		104.34						
	Total		1843.34						
22	Supplying of LTUG cable having aluminium condutor PVC insulated shethed, galvnised steel, wire / steel tap armoured cable with PVC outer sheathing 1.1 KV class.P No. 68/ I No. 4(d) 4 core 16 Sqmm KPWD Electrical SR 2010-11								
			1	25.00		**25.00**	140.40	Rmt	**3510.00**
23	Labour charges for laying of 1.1 K.V class UG cable (PWD Electrical SR-1999-2000, P No. 69 / I No. Ia In existing trencg/duct 6Sqmm to 16 Sqmm) KPWD Electrical SR 2010-11								
			1	25.00		**25.00**	10.80	Rmt	**270.00**
24	Digging or trenching of 0.6m deep x 0.5 mtr wide refilling the trench to the required ground level and consolidating etc., complete (as per Civil SR KSRB 1-2 P-7) P No. 70/ I. No. 6-c **KPWD Electrical SR 2010-11**								
	For Cutting Road Surface		1	25.00		**25.00**	117.00	Rmt	**2925.00**

	Supplying and fixing of Class A (medium duty) G.I. pipe of wall thickness not less than 3.25mm or pole/wall/roof crossing with necessary clamping arrangements for LT cable of 11/0.4 KV class P. No. TS / No.3-4.4(PWC Electrical SR 2018-19)							
	40mm dia G.I. pipe	1	1	4.00		4.00	Rmt.	1380.00
	Supplying and fixing LT cast iron pot head suitable for 11 / 0.4 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc. P. No. TS / No. 19-4.4(PWC Electrical SR 2018-19)							
	185sqmm	1				1.00	Nos	280.00
	Cutting the road surface for pipeline trenches and disposing of the excavated stuff as directed including barricading danger lighting etc. in following classifications Cutting in Cement concrete road surface (Page 259 Item 27.40)							
	for pipeline	1	200.00	0.20	0.20	1.28	Cmtr	872.59
	Basic Rate	680.00				727.16		
	Area Wagmage @ 5%	47.16						
	Total	727.16						
	Providing and filling sand in foundation upto plinth to required depth for laid out treatment including watering, ramming with lead upto 50m, and lift upto 1.5m complete as per specifications, Specification No.IS 1200 Page No7., Item No. 2.13							
		1	200.00	0.20	0.10	0.40	Cmtr	873.44
	Basic Rate	2080.00				2183.60		
	Area Wagmage @ 5%	103.60						
	Total	2183.60						
	Providing and laying in position plain cement concrete of mix M 15 with cement @ 240 kgs, with 20 mm and down size graded granite metal coarse aggregates @ 0.870 cum and fine aggregates @ 0.459 cum machine mixed, concrete laid in layers not exceeding 15cms. thick, well compacted, in foundation plinth and cills including cost of all materials, labour HOM of machinery curing complete as per specifications, Specification No.IS 4.1, 4.2 (Page No.12, Item No. 4.6)							
		1	20.00	0.30	0.15	0.90	Cmtr	5172.59
	Basic Rate	5472.00				5747.32		
	Area Wagmage @ 5%	324.32						
	Total	5747.32						
	Water charges and other service charges							18000.00
					TOTAL	for 1 bore well		644693.47
						for 5 bore wells		3223467.35
	Earthwork excavation by manual means in ordinary soil involving an average lead upto 50m and an average lift upto 1.5m, excavated surface levelled and sides neatly dressed, the disposal earth to be levelled neatly after breaking clods complete as per specifications, Sr.No.1 of Item No.3(1)							
		1	20	1.2	0.5	2	48.5	137.80	5580.9
	Basic Rate	120.00						
	Area Wagmage @ 5%	7.80						
	Total	127.80						

33	KSRB 4-1.3: Providing and laying in position plain cement concrete of nominal mix 1:4:8 using **40mm** and down size graded granite metal machine mixed, conrete laid in layers not exceeding 15 cms. Thick well compacted in foundation and plinth, including cost of all materials labour, HOM of machinery, curing complete as per specification . (Pg.No.12, It.4.3)								
	sump bottom	3	1	1.5	1.5	0.15	1.0125	5408.12	5475.7215
	Basic Rate:	cum	5102.00						
	Area Weightage @ 6%		306.12						
	Total		5408.12						
34	KSRB 4.2.2: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 Kgs with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastizers @ 3lts confirming to IS 9103-1999 RE affirmed - 2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, stair case lintels, retaining walls return walls, walls(anythickness) including attached plasters columns piers abutments pillars posts struts butresses string or lacing courses parapets copings, bed blocks , plain windows cills fillets etc., including cost of all materials labour HOM of machinery curing complete as per specifications. Sencifications No. 4(2)5-4.1.4.6 (Page NO. 14, Item NO. 4.11)								
	sump bottom	3	1	1.5	1.5	0.2	1.35		
	sump side wall	3	4	1.5	3	0.2	10.8		
	sump cover	3	1	1.5	1.5	0.2	1.35		
	deduction for cover	3	1	0.3	0.3	0.2	0.054		
						TOTAL	**13.45**	5998.54	80656.37
	Basic Rate:	cum	5409.00						
	Area Weightage @ 6%		324.54						
	Total		5998.54						
35	Providing TMT Steel Reinforcement for RCC work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.(Page No.18, Item No.4.46.2)								
	Basic Rate:	Ton ne	70966.00						
	Area Weightage @ 6%		4257.96						
	Total		75223.96						
			At 50 Kg % per cum				**0.67**	75223.96	50574.00

36	Providing and removing Centering, shuttering, strutting, propping etc., for columns, pillars, piers, abutments, post and struts, square / **rectangular slabs /side walls** polygon in plan including cost of materials, labour complete as per specification and directions of the Engineer in charge.(Page No.16, Item NO.4.32)								
	Basic Rate:	Sqm	456.00						
	Area Weightage @ 6%		27.36						
	Total		483.36						
	SIDE WALL								
	sump side wall	3	4*2	1.50	3.00		108.00		
	sump cover	3	1*1	1.50	1.50		6.75		
	deduction for cover	3	1*1	0.3	0.3		0.27		
							114.48	483.36	55336.00
37	Supplying and delivery of sub mersible pumpset suitable for borewell of 165mm dia with specified duty conditions as detailed below and satisfied in BIS with ISI mark with a minimum efficeiency of 42% pump shall confirm to IS 8034/2002 and motor confirming to IS 9283/1995 with ISI certification with latest amendemnets for the following, Page No. XLI								
	5 HP 3.5kw 5 stage sub mersible pumpset						**1**	26628.00	Nos	**26628.00**
								Sub Total b		**224250.99**
38								**Sub Total**		3447718.34
39								**Add 12% GST charges**		413726.20
40								**Add 3% KRIDL charges**		103431.55
41								**Add 1% Labour cess charges**		34477.18
42								**Miscelleneous charges**		646.73
43								**Total**		4000000.00

Certificate:

1) The work spot has been inspected and the work is found necessary.
2) The estimate is based on BANGALORE CIRCLE CSR of 2018-19 , BWSSB & PRED 2016-17
3) The provisions were made in this estimate are necessary and adequate.
4) This works come under B.B.M.P. limits.

Asst. Engineer
Ward no.07

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Executive Engineer 7/12/18
Project Division
Yelahanka Zone
BBMP, Bangalore-92

Administrative Approval
Accorded For R.S.H.O. Jalahalli only
Head of A/C P3293
CER NO :86/18-19 Dt: 07-12-18

TA CE (YNK)

Technical Sanction
Accorded For R.S.H.O. Jalahalli only
Head of A/C P3293
CER NO 152/18-19 Dt: 07-12-18

TA CE (YNK)